

CLAIMS

What is claimed is:

1. A method for controlling the temperature of a plasma within a reactor comprising:
providing a first gas distribution plate having a top surface and a bottom surface with a plurality of apertures therethrough separating said first region from said second region;
splitting a single process gas flow stream into a first gas flow stream and a second gas flow stream;
introducing the first gas flow stream into said first region of the reactor; and
introducing the second gas flow stream into said second region of the reactor substantially bypassing the first region.
2. The method of claim 1, wherein the first gas flow stream and the second gas flow stream are each introduced as a fraction of the single process gas flow stream, the method further comprising:
varying a temperature within at least one of the first region and the second region by varying a fraction of process gas flow which flows into the first region.
3. The method of claim 2, further comprising:
forming a partial pressure in the first region such that a temperature of plasma increases as a partial pressure decreases.
4. The method of claim 1, further comprising evacuating the reactor.

5. The method of claim 1, further comprising:
increasing a temperature of surfaces cooled by gases in the first region by introducing the second
gas flow stream into the second region substantially bypassing the first region.